

REMARKS

Claim 30 has been amended to specify the starch is unmodified in accordance with page 4, line 6 from the bottom. Also the repeated (and hence unnecessary) recitation that the caramel is gelatin-free has been eliminated in this claim and claim 62. Some recitations have been rearranged within the claims without changing their scope.

The ratio has been deleted from claim 32 and therefore, the objection to claim 33 can now be withdrawn,

Claim 41 has been amended such that antecedent basis is now present and the rejection under 35 USC §112, second paragraph can be withdrawn.

The claimed invention addresses the technical problem of providing soft caramels in which the gelatin normally present is replaced by a non-animal substance that has properties such as low elasticity, high water dispersibility, good bodying and texturing properties, good mouthfeel and no characteristic flavor. This has been accomplished by combining a soft caramel base which contains a polysaccharide hydrocolloid texturing agent, crystalline isomaltulose and a noncrystalline sweetener phase which in one case is maltitol syrup, polydextrose, hydrogenated starch hydrolysate or a mixture thereof and in another case is polydextrose. A particular feature of this soft caramel is that the crystalline sweetener phase is isomaltulose, i.e., the only crystalline sweetener present is isomaltulose. Non-crystalline high intensity sweeteners can be present and the composition is sucrose-free. Contrary to the

statement at the bottom of page 10 of the Office Action, the claims under consideration do state the composition is sucrose free.

It has been surprisingly established that in these combinations, the selected polysaccharide hydrocolloid has properties that enable the complete replacement of gelatin as texturing agent in soft caramels while retaining the special texture and consistency of the soft caramels. Moreover, the temperature stability of crystalline isomaltulose can be insufficient. See, e.g., "Coloration and Other Chemical Changes in the Manufacture of Palatinose Candy", and "Application for the Approval of Isomaltulose", both of record, which show that crystalline isomaltulose is heat-sensitive, shown by discoloration at temperatures over 100°C, such as used in preparation of the instant product (Example 1), and especially over the 120°C used in the examples of Barrett reference. Surprisingly, the temperature stability of crystalline isomaltulose is considerably improved by stabilizing effect of the polysaccharide hydrocolloids in the claimed combination. These aspects of the invention are unexpected and unpredictable. The comment on Office Action page 10 ignores the fact the what is there being called "substantially the same product" is not a product in any one reference but instead is a hindsight generated combination of materials without consideration of limitations stated in the references themselves.

Claims 30, 32, 33, 38, 39, 41, 42, 44-47, and 49 are rejected under 35 USC § 103 over Barrett in view of Koji, and claims 36, 37, 43, 48 and 50 are rejected under 35 USC § 103 over Barrett in view of Koji and Willibald-Ettle. All of these claims do not include modified starch as a polysaccharide hydrocolloid. Both rejections are respectfully traversed.

Barrett discloses a chewy confectionary product in which some or all of the gelatin has been replaced by oxidized starch and which contains sugar or a sugar substitute, or both. The Office Action acknowledges that Barrett fails to disclose the use of isomaltulose and treats this deficiency as the only thing lacking in the reference. There are, however, other deficiencies.

Barrett does not recognize the need to simultaneously provide a crystalline sweetener phase and a non-crystalline sweetener phase in a gelatin-free soft caramel. In addition to the non-disclosure of isomaltulose, it does not teach or suggest the concurrent presence of a non-crystalline sweetener phase which is maltitol syrup, polydextrose or hydrogenated starch hydrolyzate. It does mention the possible presence of maltitol as a sugar replacement but only when the composition is sugar based. Column 4, lines 39 et seq. Accordingly, incorporating isomaltulose into Barrett's composition would not realize the claimed composition.

Barrett is predicated on substituting oxidizing starch (a modified starch obtained as described at col. 4, line 9 et seq.) for some or preferably all of the gelatin in a chewy confection (col. 2, lines 52-55; col. 4, lines 4-8) to overcome the disadvantages associated with the gelatin while retaining the texture provided to the composition by the gelatin (col. 2, lines 52-55). The oxidizing starch is a texturing agent and is essential, and would necessarily be present in any modification of Barrett, such as for instance by Koji. Eliminating the modified starch of Barrett is contraindicated by the teachings of this reference. In independent claim 30, the texturing agent is a hydrocolloid which, due to the Markush language employed, is selected from a closed group which does not

include modified starch although it may be unmodified starch. Thus, this group of claims excludes the possible presence of an oxidizing starch.

The Barrett composition can optionally contain both gum arabic and gellan gum, but only when the composition contains the oxidizing starch, which the claimed composition does not contain. The contention in the Office Action that the gum arabic and gellan gum can be in a ratio of 5-15:1 is wrong because it is a value calculated based on the content of the gellan being 0.5-5% while that range relates to the ingredients set forth in the paragraph at column 2, lines 10-23 and gellan is not included in that list of ingredients.

Koji does teach that crystalline palatinose exists. It also teaches that caramel properties such as formability, etc., were realized when there was a balance of sugar and starch, but when an attempt was made to use palatinose alone instead of sucrose while eliminating wheat flour, significant problems resulted and the properties realized due to the presence of sugar were eliminated (page 5, first paragraph). Koji found that those problems could be addressed by adding palatinose microcrystals at a temperature at which they did not melt when the composition contains palatinose, other non-sucrose sugars, milk protein and lipids but which did not contain sucrose, starch or wheat flour (page 3, lines 1-3; page 7, lines 3-11).

Like Barrett, Koji does not teach or suggest using a non-crystalline sweetener phase which is maltitol syrup, polydextrose or hydrogenated starch hydrolyzate or a combination thereof, in combination with a crystalline phase which is isomaltulose together with a polysaccharide hydrocolloid texture agent to produce a gelatin-free soft

caramel, nor that such a combination would produce the advantages realized in the present invention.

Koji tells the skilled person not to use starch when isomaltulose is being employed. Barrett requires the use of an oxidized starch, and the claimed invention includes unmodified starch in the enumeration of the hydrocolloids.

Barrett teaches that the sugar can be replaced by one or more sugar substitutes, and gives a list of possible substitutes which does not include isomaltulose. Koji teaches that when isomaltulose was used as the only sugar substitute, it significantly degraded the properties of a caramel (page 5, first paragraph). It is, of course, not permissible to ignore this teaching which tells the skilled person that if only one substitute was going to be selected, do not use isomaltulose.

There is nothing in the combination of Barrett and Koji which suggests that a non-crystalline sweetener phase which is not palatinose but instead is polydextrose, hydrogenated starch hydrolyzate or maltitol syrup in combination with a crystalline sweetener phase which is isomaltulose only, in combination with the claim recited polysaccharide hydrocolloid texture agent provides a soft caramel, which is gelatin-free and still has a very attractive texture and chewability, as well storage capability.

The Willibald-Ettle reference was cited only to show some feature of dependent claims 36, 37, 43, 48 and 50. It was not asserted to, nor in fact does it, cure any of the basic deficiencies in the combination of Barrett and Koji. Accordingly, these claims are also patentable.

In light of the foregoing considerations, it is respectfully submitted the foregoing rejections should be withdrawn.

Claims 31, 40, 62-64 and 67-70 are rejected under 35 USC § 103 over Barrett in view of Koji and Igoe. Claims 61, 65, 66 and 71 are rejected under 35 USC § 103 over Barrett in view of Koji, Igoe and Willibald-Ettle. Both rejections are respectfully traversed.

The combinations of Barrett and Koji has been discussed above. As in the other rejections, Willibald-Ettle has been cited only to allegedly show features recited in dependent claims. That discussion is effectively equally applicable to these rejections with the added observation that these references lack any teaching about the presence of polydextrose, as required in all of these rejected claims.

Igoe has been cited to teach that polydextrose is a bulking agent which can replace sugars in reduced calorie foods, and can be used in chewing gum and candy. It therefore does not overcome the deficiencies in the other references. In addition, Koji teaches its composition has good properties, such as formability, shape-retention, and texture, and hence there is no reason to use polydextrose as a bulking and texturing agent in order to achieve properties already present.

In addition, Igoe also does not suggest the polydextrose be present in a soft caramel base mass to prove an improved recognizable feeling while the caramel is being ingested.

Accordingly, these rejections should also be withdrawn.

In view of the above amendment and remarks, applicant believes the pending application is in condition for allowance.

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